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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,080	04/28/2005	Kazuhiko Kato	271511US0PCT	2324
22850 7590 05/03/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER MAEWALL, SNIGDHA				
ART UNIT 1612		PAPER NUMBER		
NOTIFICATION DATE 05/03/2010		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/533,080

Applicant(s)

KATO ET AL.

Examiner

Snigdha Maewall

Art Unit

1612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 10-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 10-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Summary

1. Receipt of Applicant's arguments/Remarks and amended claims on 01/25/10 is acknowledged.

Claims 1, 3 have been amended.

Claims 2, 4-7 have been cancelled.

Claims 8-9 have been withdrawn.

New claims 10-17 have been added by the Applicants.

Claims **1, 3 and 10-17** are under prosecution.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3 and 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagishi et al. (JP 2000-222707) published 06/02/02, translation provided) in view of EP 1066823.

Yamagishi teaches a composition for oral cavity making teeth white, smooth and glossy, title and page 3, paragraph [0001]. The composition comprises either itself or

30% aqueous solution of fluorine compound in an amount of 0.02 to 0.7 wt. % (fluorine ion –supplying component in terms of fluorine atom) and acidic compound and its salt having pka of 2.5-6.0 in an amount from 0.1 to 10.5 mol/kg, (see abstract and page 2 and claim 1 of the translation). Claim 1 teaches pH from 3 to 5.5 and acid to be from malic acid to tartaric acid, see claims 1-3. The reference teaches that acid component is one or more of lactic acid, acetic acid, citric acid malic acid, tartaric acid and adipic acid, see claim 3 on page 2. The fluorine ion supplying compounds are disclosed in paragraph [0008] such as sodium fluoride, sodium monofluorophosphate etc. The reference teaches that additional ingredients such as drug-effect ingredient, abrasive, adhesives can be added to the formulation in paragraph [0017]. The composition shown in table 2 of Yamagishi does not show calcium ion.

The reference does not teach potassium ions.

EP teaches tooth whitening composition comprising potassium salts (which supply potassium ions). The potassium salts are used as desensitizing agents, see abstract and page 3, [0011]. Potassium salt is used in an amount of 0.0001wt % to 10wt. % in [0008].

It would have been obvious to one of ordinary to substitute potassium ions in the teachings of Yamagishi et al. in order to provide desensitizing effect motivated by the teachings of secondary reference. Potassium salt is used in an amount of 0.0001wt % to 10wt. % in [0008]. The reference does not teach the exact claimed range of potassium ion, however the reference teaches desensitivity due to potassium ions, thus optimization of amount of potassium ion would have been within the purview of skilled

artisan at the time of instant invention absent evidence of any unexpected results. Since the references teach tooth whitening composition, it is the position of the examiner that due to the whitening effect a light scattering layer would be formed as claimed because the claimed components of the composition are taught by the prior art and one skilled in the art would expect the property of light scattering effect to be associated with the chemical composition of the formulation absent evidence to contrary. Optimization of amounts would have been within the purview of skilled artisan by doing experimental manipulations at the time of instant invention. Regarding calcium ions, it is the position of the examiner exclusion of calcium ions would be obvious to one of ordinary skill in the art because should the effect due to calcium ions is not required, one of ordinary would not include in the composition as it is held that "Omission of an Element and Its Function Is Obvious if the Function of the Element Is Not Desired Ex parte Wu, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989) (MPEP 2144). Additionally, the composition shown in table 2 of Yamagishi does not show calcium ion. As such the claimed invention would have been obvious to one of ordinary skill in the art at the time the invention was made in light of the teachings of the prior art.

Response to Arguments

4. Applicant's arguments with respect to claims **1, 3 and 10-17** have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Snigdha Maewall whose telephone number is (571)-272-6197. The examiner can normally be reached on Monday to Friday; 8:30 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Krass can be reached on (571) 272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-0580. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Snigdha Maewall/

Examiner, Art Unit 1612

/Gollamudi S Kishore/

Primary Examiner, Art Unit 1612